SHOP talk

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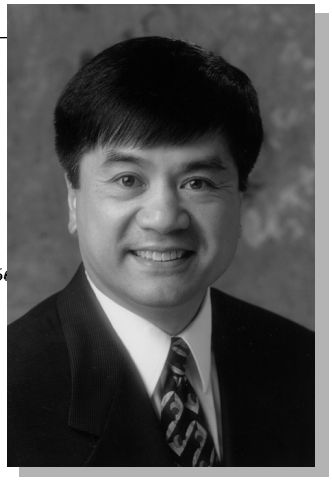

Gary Locke
Governor

GARY LOCKE
Governor

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September 23, 1997

Governor Commends Public Facility Managers

Cooperation, communication and technical proficiency applauded

When I signed House Bill 1066 into law on April 21, 1997, I did more than codify the Plant Operation Support program. We also provided facility maintenance professionals an effective, cost- and labor-saving tool: a support network to optimize our collective resources.

The Plant Operations Support consortium has proved successful largely because of your cooperation, communication skills and technical proficiency. You invest long, hard hours in a profession that receives few acts of gratitude. Let me personally thank you for the dedication and perseverance you display in maintaining our public facilities. Your actions have a direct effect on the productivity of public employees and students, and our reputation among our citizens.

I am impressed by the prestigious awards that Plant Operations has received, including receiving an honorable mention from the National Association of State Facilities Administrators in the 1997 Innovations Award competition. More recently, the consortium earned the Golden Circles Award from the International Facilities Management Association and the Award of Merit from the Association for Facilities Engineering. These awards recognize innovation, productivity, efficiency and high quality customer service. We have proved that we need not "reinvent the wheel," and that it is good business to do the job right the first time.

Total Quality Maintenance is a way of life in most of your organizations, and you constantly demonstrate your willingness to collaborate in getting the job done. We are gratified that most state agencies have renewed their subscriptions in the consortium, and we welcome new educational, municipal and port members to this exciting, award-winning family of public facility managers. The consortium's collective efforts have enabled members to realize more than $900,000 in avoided costs and to work smarter with existing resources.

Well done, public facility managers!

Gary Locke
Governor

New Program Prototypes

Preventative Maintenance (0041): Key to an effective maintenance program. A "how-to" article by Paul D. Tomlingson.

Facilities Management Practices (0042): Research Report #16 from International Facility Management Association. A summary of programs and staffing of 2,200 facility management departments published in 1996.

Facilities Management in Strategic Goals and Mission Plans (0043): Two examples of writing maintenance management into government planning and strategies. Pima Community College 1997-1999 and a Washington State Capitol Facilities biennium plan.

School Facilities Assistance Program (0044): Examples of construction issues from district strategy through site selection and performance contracting. Courtesy Puget Sound Education Service District.

Modular Classrooms (0045): King County Directors' Association specifications, general conditions and cost estimates for modular classrooms for various purposes.

Video Security Systems (0046): Program statement for video monitoring systems from Cuyahoga Community College, Cleveland, Ohio.

Design-Build Public Facilities (0047): History, criteria, guidelines, and reviews by the State of Washington for its design-build projects.

Y2K – Year Two Thousand (0048): More than just a look at computers - checklist items from airplanes to elevators, vehicles, traffic signals and more. Three policies and procedures from the state of Ohio; contract language; webpage listings.

Omega Sprinkler Heads (0049): Alerts, press releases and information from Washington state, the Central Sprinkler Company, UL, and fire associations concerning the testing of Omega sprinkler heads.

Maintenance & Related Codes (0050): From Federal regulations and the Super Fund to hazardous waste and air pollution, the Northwest Energy Efficiency Council has compiled an outstanding reference manual.

More prototypes are added monthly. For an updated listing, access the index on the program homepage

www.ga.wa.gov/plant/prototy.htm

The Plant Operations Support Consortium

Anacortes School District
Bellevue Community College
Big Bend Community College
City of Tukwila
Clark College
Clark County
Columbia-Burbank School District
Edmonds Community College
Enumclaw School District
Federal Way School District
Issaquah School District
Ketchican School District, Alaska
Lewis County
Lower Columbia Community College
Marysville School District
Mukilteo School District
North Thurston School District
Oak Harbor School District
Peninsula School District
Pierce County
Port of Anacortes
Port of Edmonds
Port of Longview
Port of Ridgefield
Port of Sunnyside
Snohomish School District
Spokane Community College, Dist. 17
University Place School District
State of Alaska

Washington State Agencies:
Corrections
Ecology
General Administration
Information Services
Labor and Industries
Liquor Control Board
Military Department
Natural Resources
Parks and Recreation Commission
School for the Deaf
Social and Health Services
State Patrol
Transportation

In cooperation with:
Association of Higher Education Facilities Officers (APPA)
Association of Washington Cities (AWC)
National Association of State Facilities Administrators (NASFA)
Operations and Facilities Council (OFC)
Washington State Association of Counties (WSAC)
Washington Association of Maintenance and Operations Administrators (WAMOA)
Washington Public Ports Association (WPPA)
Washington Association of School Administrators (WASA)

Our warm welcome to the new members in green type.
We look forward to serving your facility and operations needs.

Have you subscribed to the Plant Operations Network list-server?

It's free and provides timely, informative discussions on facility-related issues. Visit our web site at www.ga.wa.gov/plant/operlist.htm

and follow the prompts!

Shop Talk is a quarterly publication of the Plant Operations Support program. The newsletter is intended to be an informative and operationally-oriented medium for public facilities managers. Contents herein are also available on the program's web site at **www.ga.wa.gov/plant/plantops.htm**

We welcome feedback on the newsletter's contents and input from readers. We reserve the right to edit correspondence to conform to space limitations. Bob MacKenzie, program manager and editor, (360) 902-7257 or e-mail bmacken@ga.wa.gov. Karen Purtee serves as editorial assistant.

Department of General Administration, PO Box 41012, Olympia, WA 98504-1012. Marsha Tadano Long, Director.

'Year 2000' Awareness A Must for Facility Managers

When the millennium rolls around will you be ready?

"The millennium may also affect appliances and home equipment. Anything that is electric or battery- powered and is date-controlled, -driven, or -calculated could be affected by this problem." *Armstrong Today.*

Since the 1950's computer programs, computer chips, and automated equipment have been developed with operating instructions based on a date with only two digits allotted for a year. Not a problem, right? Well, consider this. When the year 2000 rolls around many computers will read the year as 00, as in 1900. Some programs will then calculate data incorrectly for year/time-based computations. This problem, and the associated problem of finding where the embedded chips are located, has been conveniently abbreviated as the ***Y2K*** issue.

So, is this merely a techy-type issue, able to be resolved by information services personnel? No, this applies to every facility, maintenance, transportation, food service and/or grounds director. **Public facility managers are realizing just how pervasive "embedded chips" might be and what they mean to their respective operations.** The answer to the problem is to know where those embedded chips are, how they're programmed and what their effects will be ***before*** December 31, 1999 (that's less than 820 days away)!

This issue is a hot topic to those in the Plant Operations Support program. District facility staff needing more information should call the Plant Operations Support program staff at (360)902-7257. The program staff have compiled an extensive listing of Y2K resources, as well as member recommendations and model documents detailed listing of items requiring inventory and certification. A videoconference on the Y2K issue is scheduled for November 20, 1997.

Videoconference to explore Y2K issue

IFMA joins in sponsoring public forum

A videoconference, scheduled for 10 a.m. Thursday, November 20, will be jointly sponsored by the Plant Operation Support program and the South Puget Sound Chapter of the International Facilities Management Association (IFMA). The topic of the conference will be the Year 2000 millennium conversion, or Y2K issue. The issue surrounds the embedded chips in computers and other automated and calibrated equipment and devices. IFMA has invited corporate involvement and is working closely with plant operation support staff to provide a lively, informative forum.

Representatives from the State Departments of Information Services and Transportation are expected to serve as panelists along with a corporate sponsor. At least five sites have been identified as up-down links for the videoconference: Olympia, Vancouver, Pasco, Yakima, Spokane and Mount Vernon. Efforts are underway to link Seattle and other sites. Flyers announcing the event and registration information will be forwarded to consortium members by October 20, 1997. Updated information will also appear on the program's web site and network list-server.

"Mark your calendar for November 20 and bring your key staff," said Ron Niemi, board member of the South Puget Sound IFMA Chapter. "This issue affects all of our facilities and we'll avoid reinventing the wheel."

Omega Sprinkler Heads Found Defective

Facility managers are urged to inspect sprinklers to assure safety

Central Sprinkler, a major fire sprinkler manufacturer, has discovered a problem with their "Omega" fire sprinkler heads. The O-ring assembly in the Omega sprinkler heads may stick and fail to operate fully. Typically, this type of fire sprinkler head is used in business, residential or health care facilities. The failures have been reported in national media and an advisory issued by the Washington State Fire Marshall. An alert was mailed to each Plant Operation Support program member and placed on the web page and over the Plant Operations Network list-server.

Plant Operations Support consortium members and other public facility managers are advised to follow the steps outlined in the Fire Marshall's advisory to health care facilities administrators:

- Survey or contact licensed fire sprinkler system contractors to survey your facility for the sprinkler heads in question. All state licensed sprinkler contractors are being notified of the situation.
- If Central Omega sprinkler heads are installed in your system, contact Central Sprinkler Corporation at (800) 523- 6512. They request a sample of the sprinkler heads from the system for analysis and will provide a kit for obtaining those samples. The kit will include replacement sprinkler heads.
- Have the sample heads removed and replacement heads installed by a state licensed fire sprinkler system contractor.
- Compliance in health care facilities will be verified by a state fire safety inspection.

At least one state has decided to replace all Omega heads with another manufacturer, rather than undergo Central's testing regimen. **Call Karen Purtee (360)902-7194 to order an informational packet.**

Member News:

Plant Operations Support program "provides resources and linkages"

Managers view program as way to better accomplish missions

Dept. of Ecology Positioned to Utilize Program

The Washington State Department of Ecology has joined the Plant Operations Support program, adding its formidable resources to those of other state agencies and many educational and municipal organizations. The department hopes to use the program to enhance communication with statewide clients and to access the resources and research potential of the consortium.

"We see membership in the consortium as adding value to our programs," said Carol Fleskes, assistant director, Administrative Services Division. "My staff will be able to obtain critical research and relevant facility operations data and program staff will be able to easily provide environmental management information to a large segment of plant operations staff in the state."

The Departments of Ecology, Labor and Industry, and Information Services have joined the consortium to enhance internal program missions, as well as their facility operations. Most state agencies have subscribed to the self-sustaining program.

"We join other state agencies and public organizations in forming a self-supporting consortium that maximizes our strengths and enables us to better accomplish our missions," said Fleskes. "Membership in an award-winning consortium of public facility managers is one way to improve quality customer service and allow us to work smarter."

Dept. of Information Services Joins Consortium

The Facilities Services section of the state Department of Information Systems (DIS) has joined 37 other state agencies, educational and municipal organizations, and port districts in subscribing to the Plant Operations Support program. The department views its membership as a way to access critical facility-related information and to communicate directly to stakeholders.

"This is an opportunity for DIS to access significant resources and provide leadership in the information arena in a statewide consortium," said Tuck Wilson, manager of Facility Services.

Wilson said they were impressed by data provided to House and Senate committees indicating that program members enjoyed more than a 6:1 ratio of benefit to subscription costs. The consortium is self-sustaining and plans to leverage DIS' expertise to provide distance learning and other technical consultative capabilities. An added advantage is the number of K-12 school district members able to utilize the enhance provisions of the K-20 network.

The K-20 Educational Telecommunciations Network is intended to be an integrated and interoperable educational technolgy network serving kindergarten through higher education and promoting access for Washington citizens.

"Plant Operations Support provides resources and linkages," said Wilson. "We're looking forward to giving and receiving within the consortium."

Building Maintenance Team's Diligence Leads to Electronic Ballast Replacement

Mike Leonard, building manager, and Robert Knierim, electrician at the five-year old Labor & Industries Building in Tumwater recently negotiated a complete replacement of the electronic ballast. Ballast failures were running above industry average in the 412,400 sq. ft. structure. Return of power after a recent utility outage resulted in simultaneous failure of some 200 ballast.

Leonard and Knierim followed up with the manufacturer, Motorola, which discovered a defective component in the electronic circuitry. Ballast will be replaced throughout the building in a phased program, with all costs for equipment and labor borne by Motorola. The replacement installation will receive a new two year warranty.

"This type of initiative is commendable," said Paul Fielder, a state electrical engineer familiar with the L&I building. "Facility managers and operators that pay attention to detail tend to be the most successful...Mike and Bob fall in that category."

Digital Cameras Found Useful in Facility Support

The popularity of digital cameras has received a boost from the facility manager community. The cameras have been found useful in recording critical equipment data, shop layouts, safety equipment procedures, construction sites and more. The cameras look and feel like traditional types, but they use computer chips to record images, rather than film. Data is then downloaded to a personal computer, where the photos can be integrated into documents, expanded, modified and printed.

Many facility managers have called to inquire where the cameras could be purchased and whether or not they were included in a state contract. The Plant Operations Support staff contacted the Office of State Procurement (OSP) and provided technical and historical data for contract analysis and bid purposes.

"Our current contractor has made a model available for immediate needs, and we are researching specifications to obtain the best camera at the best price for future term contracts," said Deborah Chakos, traffic manager for OSP.

Effective October 15, 1997, a digital camera will be provided through Abolins under contract 18290. "We welcome input as to how it is working or what additional equipment is needed." Chakos urges customers to visit the OSP web site at www.ga.wa.gov/proc.htm to view the contract," or call me at (360)902-7442 for a copy."

Building Operator Certification

Course Offered In Spokane and Snohomish Areas

Northwest Energy Efficiency Council (NEEC) again offers the Building Operator Certification (BOC) series to operations staff. The Spokane series kicked off in September 1997, but can accept late comers, said Cynthia Putnam, program manager.

"Facility staff can still enroll in the Spokane series," said Putnam. "We'll work with them to ensure a completion date is achievable and best fits their work schedules."

A similar series is scheduled for Snohomish area facility operators for winter 1998.

The goal of the Snohomish series is to certify 20 operations staff, Putnam said.

The BOC program is designed for operations and maintenance staff in public and commercial buildings. Training participants have included the U.S. Navy Boeing, School Districts, and Hospitals. The Snohomish series will be one of the first to offer statewide certification to participants.

Certified Building Operators have demonstrated competence in building equipment and controls layout, equipment energy consumption, HVAC energy inspection reporting, lighting surveys, indoor air pollutant sources and pathway locations, and facility electrical distribution.

"Similar industry training courses often charge two or three times more than this course," said Putnam. "This is a cost-effective way to obtain training on complex facility systems."

The fee for the training and certification series is $550 per participant. It includes seven course (equivalent to 56 hours of training), course handbooks, 12 hours of facility project assignments, and the application for certification.

"We need facility managers help to make these series successful," said Putnam. "They offer a rare opportunity for participants to learn many critical facets of building operations without breaking their budgets."

Contact Cynthia Putnam, BOC Project Manager (206-726-9397), or Steve Ottenbreit, Snohomish PUD (425-304-1787) for more information.

Certification course "worth your time," says facility director

Peninsula School District resource specialist recommends course to others

The Building Operator Certification courses currently being offered in Spokane and scheduled for Snohomish areas have received rave reviews from a recent graduate. Jim Bellamy is the resource conservation specialist for Peninsula School District. He recently graduated from the seven-part BOC series in Kitsap county.

"The course clarified many facility-related issues and served to expose participants to varied functions of building operations."

"The BOC covered all the bases, from electrical and HVAC systems to indoor air quality. Even though I had received training in these areas before, the coverage of the topics was fresh and highly illuminating, " Bellamy said. "The course clarified many facility-related issues and served to expose participants to the real world of building operations."

John VanIersel (l), Peninsula District facility director, and Jim Bellamy, district resource conservation specialist, review results of a recent facility assessment. Bellamy was certified as a Building Operator upon graduation from the seven-part course in Kitsap county. Peninsula School District recently joined the Plant Operations Support consortium.
Photo by Bob MacKenzie

Bellamy said the course directly enhances his ability to perform critical utility management conservation functions in the district. Peninsula School District's facilities exceed 1.2 million square feet.

"My recommendations to facility and administrative staff are taken credibly," he said. "The training I received in the BOC was personally and professionally rewarding and adds value to my duties here at Peninsula."

Peninsula School District recently subscribed to the Plant Operations Support program. Bellamy sees the district membership in light of his recent BOC training.

"The BOC showed how valuable interaction with other facility managers can be if accessed early in a process or project, "he said. "The Plant Operations Support program connects member problems with solutions...it embodies principals of cooperation and sharing."

John VanIersel is Peninsula School District's Facility Director. He works closely with Bellamy and concurs in the value of the Building Operator Certification training.

"Jim is well respected in the district," he said. "I depend on his expertise and recommendations to ensure we are effectively utilizing all of our resources in an efficient manner."

Filter Out IAQ Problems

by Thomas Capes

In part two of this three part series, learn how to improve the techniques of trapping particles and how to prevent expansion of unwanted contaminants.

If Trapped, Don't Let It Grow

In this case, *it* refers to microbial growth on the air filtration media. According to a recent study, dust accounts for roughly 25% of the contaminants resulting in IAQ problems. So, until the advent of the use of antimicrobials in the air filtration industry, manufacturers only concerned themselves with one-fourth of the airborne contaminants that could potentially cause IAQ problems.

Other studies cite the adverse effect of microbial growth on IAQ. The findings of these studies indicate that fungi and bacteria account for nearly twice the number of causes of IAQ problems as dust.

However, whenever higher efficiency air filtration products are used, the possibility that the air filtration media will also trap microbes increases. The media, and the particulate it has trapped, then can become the source of amplified microbial growth - serving as an incubator. The use of a broad-spectrum antimicrobial treatment will minimize the potential for the filter media to act as the source.

A recent study sponsored by ASHRAE summarized the specifics of the microbes affecting IAQ. In its introduction, the study succinctly defines this issue: "A current challenge in the HVAC field is the control of microbial aerosols. Microbial aerosols contain organisms such as bacteria, fungi, algae, protozoa, pollen, and viruses. Many of these particles cause allergic reactions and/or are the causative agents of various infectious diseases. Good indoor air quality constitutes the control of both nuisance dust and microbial particles."

What does this mean in the indoor environment? It means an air filter is a point source of microbial growth at the beginning of an HVAC system. When potentially harmful microbes grow on a filter media, their size and the fact that they can remain airborne and viable means they can be broadcast throughout the areas served by an air handling unit.

Many HVAC systems use 100% outside air to help limit the building's exposure to microbial growth. However, the use of 100% outside air doesn't eliminate the need for control of microbial growth on the air filter media, or diminish the potential adverse effect of that growth on occupants in the facility.

The moisture level within an indoor environment is a key variable determining the potential for microbial growth on indoor air surfaces, including air filter media. The ability (or, more accurately, the inability) to control moisture is the critical issue calling for the use of antimicrobials on indoor surfaces.

If HVAC management could completely and constantly control moisture to an acceptable level, the need for antimicrobial treatment would be eliminated. But in reality, most buildings are not in total and constant control of the moisture level – weather, power outages, energy control efforts, and so on make that impossible without expensive back-up systems that just don't make economic sense.Therefore, the use of antimicrobial treated surfaces is an economical, proactive step in protecting building occupants from the potential for microbial growth emanating from the air filter media.

With all of the promotion of antimicrobial treatments by a number of manufacturers for various indoor surfaces (carpeting, paint and coatings, ceiling tiles, fabrics, etc.), including air filtration media, how can contractors be assured that the chemicals are safe for their intended use? Ask the manufacturer of the final product to provide the manufacturer's safety data sheet (MSDS) for the active chemical used in an antimicrobial treatment. The manufacturer should also provide the stamped EPA technical data sheet documenting the fact the product has been tested by an independent lab and is safe for its intended end use.

For air filtration products, the critical issue is off-gassing of the antimicrobial. The product manufacturers have to demonstrate to the EPA that the antimicrobial doesn't enter the air stream at levels measurable by analytical equipment

Look for Part Three: If not trapped, control its growth, in the winter issue of Shop Talk.

Thomas Capes is a market development manager for AAF International, the manufacturer and marketer of American Air Filter products in Louisville, KY. AAF shares the Washington state contract for air filters with another vendor.

King County Facilities Management Rises to Challenges

E-Mail Work Requesting at Regional Jail Center Proves Useful to Maintenance Staff

By John Todderud, president, WinterCress Development, Inc.

King County Regional Justice Center – Kent, Washington
Photo by John Todderud

King County plays host to more municipalities than just Seattle. The county has grown into one of the greatest population cross-sections in the western United States, with over thirty surrounding cities and towns. Urban Seattle residents demand completely different services than the south county farming communities of Auburn, Pacific, and Black Diamond. Redmond and Bellevue form a technology corridor, and the western Cascade towns of Index, Gold Bar, and North Bend host tourism, logging and serve as "bedroom" communities for overworked commuters.

The diverse requirements of the county and its facilities presents special challenges to the staff of King County's Facilities Maintenance Division. When the county's jail population could no longer squeeze into the crowded downtown jail, a new Regional Justice Center (RJC) was constructed in Kent, twenty miles south of downtown Seattle. The crews of the division were faced with the intimidating task of stretching already thin resources to accommodate the new facility.

"There was no choice but to explore all options for maximizing our facility maintenance resources," said Robin Bishop, division manager. "Reorganizing staff and optimizing automation was an effective combination that has provided tangible results."

The facilities maintenance division had used WinterCress Development's *Maintenance Director* software since 1991 for all scheduling , maintenance tracking and inventories. WinterCress is based in Renton and a Washington-based provider has facilitated quick response and training, said Bishop. King County employees have worked with the developer to design several upgrades to the system over the years and to provide training for personnel at the RJC to generate work requests, send them through E-mail to their supervisors on-site, allow supervisors to approve requests and forward them through E-mail to the work control desk, or disapprove the requests.

The work order desk needed the option of saving the message in an e-mail folder or just clicking once to create a work order. The system had to be simple for field staff to learn and use, and navigationally fast for supervisors and the facilities work order desk staff.

The first implementation of the new E-mail Requesting Module was at the RJC. The new E-Mail Requesting Module was installed in May 1997 and the work order desk began processing requests. They now send work orders back to the crews at the RJC for quick action.

"The crews do not have to wade through everyone else's work orders in the process," said Bishop. "The crews have direct database access to the county's facilities database and can review proposed work requests, prioritized by urgency level, by crew, and by the number of days the request has been outstanding."

Since this initial implementation, use of this module has expanded to other departments in the county, including Judicial Administration, Prosecuting Attorney, Adult Detention, and Criminal Investigation. Each of the department staff enjoy the benefits of knowing their requests are transmitted in complete form, with their location and contact name included. More importantly, the requests are approved before being placed into the maintenance database.

King County's Facilities Maintenance Division works under mandates similar to other public facility management organizations: operate more efficiently; work smarter; and do more with less. Technology in this case proved essential to meeting and exceeding the mandates. Their automated e-mail based work requesting system saved them at least one full time position controlling the effective flow of maintenance information from the new regional jail to affected crews.

For more information on WinterCress Development's Maintenance Director or other products, contact John Todderud, president, WinterCress Development, Inc. (425)228-0635, e-mail: johnt@wintercress.com

Imagine If You Will

Internet Use in Facilities Management

by Bob MacKenzie

"Imagine if you will...," intoned Rod Serling as he introduced another tantalizing episode of *The Twilight Zone*. Now, imagine if you will, the facilities management arena transformed in ways previously thought as only grist for Serling's scriptwriters. The "Internet Zone" has forever changed the way we do business. The challenge is going to be how to optimize the opportunities that lay ahead.

The state of the art in facilities management is changing so rapidly we find it hard to read each new system operating manual before we must purchase and learn the next. The Internet, document imaging, facilities management software and CAD/CAFM systems are all converging at an ever-accelerating pace to create some real and unheard-of opportunities.

"We use our Internet access for high speed research and other purposes, and that's essential to a small staff," said Chet Higgins, Facilities Division Manager for Lewis County. "We're able to track down accurate information in minutes that would normally take hours or days and use the data to improve our service provision."

Lewis County uses the Internet as a linkage to the Plant Operations Support program — a form of streamlined communication, according to Higgins. "We're able to rapidly communicate and access critical data that assists us in our daily tasks; ultimately it enables better customer service."

A number of successes have been realized by the Plant Operations Support program in making full use of the Internet. Program staff cope with the high number of assistance requests from program members by utilizing the speed and breadth of the Internet. The technology and strengths of the Internet is used for research and comparison purposes. It also enables connection of building automation networks for operational solutions, marketing products and services, creating linkages to manufacturers, routine communication through extensive use of e-mail, and administering a list-server where solutions can be coupled with problems.

GA serves as the primary procurement agency for state and many local governments and other public organizations. The Internet has been optimized by its Office of State Procurement to access existing contracts, administer a list-server, provide education and notification, vender registration, catalogues of supplies and services available, and much more.

"GA by no means believes it has realized the full potential of the "Net," but it is trying hard," said Kip Eder, manager of technical services in the Division of Engineering and Architectural Services. "Old habits are hard to break and automation can be quite intimidating."

There are software applications that enable the Internet user the ability to launch targeted searches of dozens of "search engines" simultaneously. The software packages can be programmed to complete their work after-hours so that the data is available to the requester the following morning. Some searches can yield more than 300 web sites matching the researcher's parameters!

"Can you imagine trying to synthesize the information provided on those 300 separate web sites," Eder said. "These vexing issues have significant impact in many subject facilities management areas, including staffing, time on task, training and level of education, and budget".

GA's Division of Engineering and Architectural Services is exploring many options concerning use of Internet. Computer-assisted Design (CAD) and document imaging systems present intriguing possibilities and challenges. Just think of the options that are presented when building owners, project managers, designers, general contractors and maintenance personnel can review construction documents, make comments, recommend system fixes, and see immediate results, while all are working in separate parts of the state or country.

The potent power of the Internet may cause facility managers some degree of anxiety, but should not be viewed as beyond our horizons. The time to enter cyberspace is now! The facilities management arena can and should be a leading advocate for maximal use of the Net and all it represents. "Imagine if you will..."

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